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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/547,904	10/25/95	SEKIYA	T 2271/45006-A

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E1M1/0530

EXAMINER

LE, N

ART UNIT PAPER NUMBER

2108

17

DATE MAILED: 05/30/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

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Responsive to communication(s) filed on 10/25/95

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

The statutory period for response to this action is set to expire 3 month(s), or thirty days, never is longer, from the mailing date of this communication. Failure to respond within the period for response will cause application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR (a).

Disposition of Claims

Claim(s) 1, 3-12 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1, 3-12 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Specification Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.

☒ received in Application No. (Series Code/Serial Number) 08/162,650

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Comments

☒ Notice of Reference Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

2. Claims 1, 5, 6, 9-11 are rejected under 35 U.S.C. § 103 as being unpatentable over Kashimura et al. (5,245,361) in view of Cowger et al. (4,931,811).

Kashimura et al. disclose all basic claimed features of the invention of an ink jet recorder comprising a recording head unit 10 (Fig. 17) containing energization part to form ink jet hence suggesting the common incorporation of ink passage and nozzles in the head, an ink inlet 312k including filter means 311d, an ink reservoir 312 holding a material 312a infiltrated with ink, a carriage 20 having a base part carrying an interconnection pattern 20 for establishing electrical contact with the head and a positioning part 20b (Fig. 5A) for determining the position of the head with respect to the carriage, wherein the head carries a first connection means 311a and a first guide part 311b connecting with a second connection means of elastic seal 312m and a second guide part 312b respectively on the reservoir which suggests to one skilled in the art that the reservoir connected to the recording head is removable therefrom.

Kashimura et al. do not disclose the filter to be made of stainless steel, a vent on the reservoir closed by a removable seal member of a screw and of a rigid projection.

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However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a filter of stainless steel material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Nevertheless, Cowger et al. disclose an ink jet recorder wherein a wire mesh filter 26 is utilized in order to prevent air from an ink reservoir being drawn down to a recording head; therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to incorporate the wire mesh filter of Cowger et al. into Kashimura et al. for the purpose of preventing air bubbles and hence dust particles from entering the recording head, as recognized by both teachings.

Cowger et al. also disclose a vent 30 closed by a removable seal member for supplying and replenishing air to the ink reservoir; moreover, to modify the seal member to be a screw or a rigid projection would have been obvious and only involve routine skill in the art to obtain an equivalent element of a removable seal member as taught by Cowger et al. Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to incorporate the vent with the removable seal member of Cowger et al. in Kashimura et al. for the purpose of providing ambient air communication to the ink reservoir.

3. Claims 3, 4 are rejected under 35 U.S.C. § 103 as being unpatentable over Kashimura et al. in view of Cowger et al. as applied to claim 1 above, and further in view of Kurata et al. (5,138,342).

Kashimura et al. as modified by Cowger et al. further do not disclose the carriage including a cover part having an interconnection pattern, mounted on and rotatable with respect to a base part, wherein the cover part urges

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the recording head upon the base part establishing electrical contact with the head.

Kurata et al. disclose an ink jet recorder comprises a carriage 2 (i.e. Fig. 8A) including a lever mounted on and rotatable through shaft 9 with respect to a base part of the carriage for urging a recording head onto the base, wherein the base part carrying a positioning part 2c for forming engagement with the head on which nozzle is formed, and a side part of the carriage carrying an interconnection pattern 6 for establishing electrical contact with the head.

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to incorporate a lever as taught Kurata et al. functioning as a cover to a base part of the carriage as claimed for the purposes of urging the head onto the carriage and causing electrical contact between the head and the carriage. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to position the interconnection pattern on the lever or cover part of the carriage and to position a correspondent pattern on the recording head of Kurata et al. for the purpose of joining the patterns for electrical connection, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

4. Claims 7, 8 are rejected under 35 U.S.C. § 103 as being unpatentable over Kashimura et al. in view of Cowger et al. as applied to claim 1 above, and further in view of Hildenbrand et al. (3,708,798).

Kashimura et al. as modified by Cowger et al. further do not disclose a tubular member having a sharp point for breaking a seal membrane of an ink reservoir.

Hildenbrand et al. disclose an ink jet recorder comprising a needle 41 or a tubular member having sharp point for breaking a seal membrane 42 of an

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ink reservoir in order to generate ink flow to a recording head. Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to incorporate the utilization of the tubular member for breaking the seal membrane as taught by Hildenbrand et al. in the pertinent art of Kashimura as modified for the purpose of establishing in flow for recording operation.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 12 is rejected under 35 U.S.C. § 102(b) as being anticipated by Kasugayama et al (4,419,678).

Kasugayama et al disclose all basic claimed features of the invention of a method for recording an image comprising the steps of mounting an ink reservoir (Fig. 3/35) upon a recording head unit (33) and breaking a seal member (39) on the reservoir.

Response to Amendment

7. Applicant's arguments filed 10/25/95 have been traversed in the rejection above wherein the teaching of Kashimura et al would suggest to one skilled in the art to detach the reservoir from the recording head to meet the limitation as claimed.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Le whose telephone number is (703) 308-0750.

NL
May 6, 1997



N. LE
PRIMARY EXAMINER
GROUP 2100